

What we claim is:

1. A process of isolating an extract from a *Euphorbia* obesa plant, comprising:
preparing a sample of said plant comprising removal of the latex material;
dissolving said sample with a first solvent to form a solution;
separating said solution into a liquid and a pulp fraction; and
(purifying said pulp fraction; *is this the extract?*)
wherein said extract induces apoptosis and inhibits growth of a cancerous cell.
2. The process of claim 1 wherein said sample is derived from the bulb portion of the plant.
3. The process of claim 1 wherein said plant weighs less than 100 g.
4. The process of claim 1 wherein said first solvent comprises methanol and chloroform.
5. The process of claim 1 wherein said process further comprises exchanging said first solvent of said pulp fraction with a second solvent.
6. The process of claim 5 wherein said step of solvent exchange comprises evaporating said pulp fraction into a concentrate and dissolving said concentrate into a second solvent.
7. The process of claim 5 wherein said second solvent is selected from the group consisting of DMSO, methanol and a mixture of hexane and chloroform.
8. The process of claim 1 wherein said purifying step comprises eluting said pulp fraction through a silica gel column with 90% chloroform and 10% methanol.

↑ sample latex
or
what's left?

9. The process of claim 1 wherein said purifying step comprises eluting said pulp fraction through a silica gel column with 80% hexane and 20% ethyl acetate.
10. The process of claim 1 wherein said purifying step comprises eluting said pulp fraction through a silica gel column with 70% hexane and 30% ethyl acetate
11. The process of claim 1 wherein said purifying step further comprises sequentially eluting said pulp fraction with DEAE-Sephacel in chlorine with 70% chlorine and 30% methanol.
12. The process of claim 1 wherein said purifying step further comprises resolving said pulp fraction by reverse phase HPLC with 95% methanol and 5% water.
13. The process of claim 1 further comprising detecting the bioactivity of said pulp fraction by incubating said fraction with LnCaP prostate cancer cells and determining apoptosis in 50% or greater of said cells.
14. The process of claim 1 wherein said cancerous cell is a mammalian cell.
15. The process of claim 14 wherein said cancerous cell is a human cell.
16. The process of claim 1 wherein said cancerous cell is a melanoma cell.
17. The process of claim 16 wherein said melanoma cell is selected from the group consisting of a Hs294T, A375P, A375M, M-21, AAB-1, AAB-2 and B-16 cell.
18. The process of claim 16 wherein said melanoma cell is a B-16 cell.
19. The process of claim 1 wherein said cancerous cell is a non-small cell lung cancer cell.

20. The process of claim 19 wherein said non-small cell lung cancer cell is selected from the group consisting of a H322 and H522 cell.
21. The process of claim 1 wherein said cancerous cell is a prostate cancer cell.
22. The process of claim 21 wherein said prostate cancer cell is selected from the group consisting of a LnCaP and PC-3 cell.
23. The process of claim 21 wherein said prostate cancer cell is a LnCaP cell.
24. The process of claim 1 wherein said cancerous cell is a breast carcinoma cell.
25. The process of claim 24 wherein said breast carcinoma cell is selected from the group consisting of a MCF-7, MCF-7/TNFR and SKBr-3 cell.
26. The process of claim 1 wherein said cancerous cell is an ovarian cancer cell.
27. The process of claim 26 wherein said ovarian cancer cell is a Hey cell.
28. The process of claim 1 wherein said cancerous cell is a lymphoma cell.
29. The process of claim 28 wherein said lymphoma cell is selected from the group consisting of a Jurkat and U937 cell.
30. The process of claim 1 wherein said cancerous cell is a leukemia cell.
31. The process of claim 30 wherein said leukemia cell is selected from the group consisting of a K562, MOLT-4 and THP-9 cell.

32. A method for inducing apoptosis and growth inhibition of a cancerous cell comprising
isolating an extract from of an *Euphorbia* obesa plant according to the steps of claim 1; and
contacting said cancerous cell with effective amount of said extract.
33. The method of claim 32 wherein said extract is derived from the bulb portion of the plant.
34. The method of claim 32 wherein said extract comprises a single compound.
35. The method of claim 32 wherein said extract comprises a plurality of compounds.
36. The method of claim 32 wherein said cancerous cell is contacted by said extract *in vitro*.
37. The method of claim 32 wherein said cancerous cell is contacted by said extract *in vivo*.
38. The method of claim 37 wherein said effective amount is administered directly to a tumor site.
39. The method of claim 38 wherein said effective amount is further administered intraperitoneally.
40. The method of claim 32 wherein said effective amount is at least 0.5 mg.
41. The process of claim 32 wherein said cancerous cell is a mammalian cell.

42. The (process) of claim 41 wherein said cancerous cell is a human cell.
43. The (process) of claim 32 wherein said cancerous cell is a melanoma cell.
44. The (process) of claim 43 wherein said melanoma cell is selected from the group consisting of a Hs294T, A375P, A375M, M-21, AAB-1, AAB-2 and B-16 cell.
45. The (process) of claim 43 wherein said melanoma cell is a B-16 cell.
46. The (process) of claim 32 wherein said cancerous cell is a non-small cell lung cancer cell.
47. The (process) of claim 46 wherein said non-small cell lung cancer cell is selected from the group consisting of a H322 and H522 cell.
48. The (process) of claim 32 wherein said cancerous cell is a prostate cancer cell.
49. The (process) of claim 48 wherein said prostate cancer cell is selected from the group consisting of a LnCaP and PC-3 cell.
50. The (process) of claim 48 wherein said prostate cancer cell is a LnCaP cell.
51. The (process) of claim 32 wherein said cancerous cell is a breast carcinoma cell.
52. The (process) of claim 51 wherein said breast carcinoma cell is selected from the group consisting of a MCF-7, MCF-7/TNFR and SKBr-3 cell.
53. The (process) of claim 32 wherein said cancerous cell is an ovarian cancer cell.
54. The (process) of claim 53 wherein said ovarian cancer cell is a Hey cell.

55. The (process) of claim 32 wherein said cancerous cell is a lymphoma cell.

56. The (process) of claim 55 wherein said lymphoma cell is selected from a group consisting of a Jurkat and U937 cell.

57. The (process) of claim 32 wherein said cancerous cell is a leukemia cell.

58. The (process) of claim 57 wherein said leukemia cell is selected from a group consisting of a K562, MOLT-4 and THP-9 cell.